

## **REMARKS**

### **Formal Matters**

Claims 136-154 and 156-163 are pending after entry of the amendments set forth herein.

Claims 136 and 160 are amended for clarity. Support for the amendments is found in ¶¶2, 16, 46 and Fig 7, for example. No new matter is added.

Reconsideration of this application is respectfully requested.

### **Rejection of claims under 35 U.S.C. § 112, first paragraph (new matter)**

Claims 136-143, 156-163 are rejected as not meeting the written description requirement of 35 U.S.C. § 112, first paragraph. This is a new matter rejection.

In this rejection, the Examiner argues that the term “wherein said G protein coupled receptor has constitutive activity” introduces new matter. Applicants disagree.

Explicit support for constitutively active G protein coupled receptors is found in the specification at, for example, in ¶13 on page 4 (i.e., “Stabilization by such ligand-independent means is termed “constitutive receptor activation”...”), ¶36 on page 11 (i.e., “Methods of making a constitutively active mutant of a GPCR are within the purview of those of ordinary skill in the art”; see also ¶68 on page 18 and ¶137 on page 28 for similar language), ¶343 (which provides a definition for the term “Constitutively active receptor”) and ¶426 on page 95 (i.e., “The use of an endogenous, constitutively active GPCR or a non-endogenous constitutively activated GPCR....”). Constitutively active receptors are also discussed in ¶427, ¶428, ¶432, and throughout the Examples section of the specification. Indeed, a search for the word “constitutive” indicates that constitutively active GPCRs are mentioned approximately 70 times in the specification of the instant application.

Given that the instant application explicitly describes constitutively active G protein coupled receptors at numerous positions, the Applicants submit that this rejection lacks basis and should be withdrawn. Withdrawal of this rejection is requested.

**Rejection of claims under 35 U.S.C. § 112, first paragraph (enablement)**

Claims 136-143, 156-163 are rejected as not meeting the enablement requirement of 35 U.S.C. § 112, first paragraph.

Applicants traversed this rejection in their response of April 27, 2010. The Applicants' prior arguments are preserved for appeal and not reiterated herein for the sake of brevity.

In this Office Action, the Examiner focuses on an issue that he apparently believes is germane to the Applicants' prior arguments. Specifically, the Examiner believes that because "human RUP40 is not disclosed as being constitutively active": a) the claimed method can only be done with an agonist for the receptor or making a change to the receptor to make it constitutively active and b) the limitation "wherein said G protein-coupled receptor has constitutive activity", as found in claim 136 is not meaningful.<sup>1</sup>

To the extent that the this rejection is not addressed in the prior section of this response, the Applicants submit that Example 14 (starting on page 132) shows that recombinant expression of wild type human RUP40 (SEQ ID NO:2; see, e.g., ¶550 of the specification on page 132) in cardiomyocytes causes an increase in IP<sub>3</sub>, and that Example 15 (starting on page 133) shows that recombinant expression of wild type RUP40 in cardiomyocytes stimulates hypertrophy.

The Applicants submit that the results described in Examples 14 and 15 could only have been obtained if RUP40 had a basal level of constitutive activity. Further, ¶553 of the specification (on page 133) states that human RUP40 "manifested a level of constitutive Gq coupling activity". Thus, contrary to what the Examiner argues, human RUP40 *is* disclosed as having constitutive activity.

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<sup>1</sup> Specifically, the Examiner states that the Applicants' prior statement that the claimed method may be done without an agonist for the receptor and without making a change to the receptor to make it constitutively active is unpersuasive "because the human RUP40 is not disclosed as being constitutively active" (OA page 8, line 20). In a similar way, the Examiner argues that the limitation "wherein said G protein-coupled receptor has constitutive activity", as found in claim 136, "does not represent a meaningful functional limitation because the human RUP40 is not disclosed as being constitutively active." (OA page 9, line 18).

As such, the reason that the Examiner uses to dismiss the Applicant's prior argument (which are completely based on "human RUP40 is not disclosed as being constitutively active") lacks foundation.

This rejection should therefore be withdrawn.

**Rejection of claims under 35 U.S.C § 102(b)**

Claims 160 and 162 are rejected under 35 U.S.C § 102(b) as allegedly anticipated by Feder (U.S. Patent 7,049,096).

Without any intention to acquiesce to the correctness of this rejection and solely to expedite prosecution, claim 160 has been recited to recite "obtaining a determination that the compound identified in (b) inhibits hypertrophy of a myocardial cell".

Feder does not disclose any link between human RUP40 and myocardial cell hypertrophy and, as such, fails to provide "obtaining a determination that the compound identified in (b) inhibits hypertrophy of a myocardial cell", as recited in claim 160.

Since Feder does not disclose each and every element of the rejected claims, Feder cannot anticipate the claims and this rejection may be withdrawn.

Withdrawal of this rejection is respectfully requested.

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number AREN-060.

Respectfully submitted,  
BOZICEVIC, FIELD & FRANCIS LLP

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By: /James S. Keddie, Reg. No. 48,920/  
James S. Keddie, Ph.D.  
Registration No. 48,920

BOZICEVIC, FIELD & FRANCIS LLP  
1900 University Avenue, Suite 200  
East Palo Alto, California 94303  
Telephone: (650) 327-3400  
Facsimile: (650) 327-3231